

# WATERLOO CEMENT MACHINERY CORPORATION

Manufacturers of Concrete Mixers and Pavers, Backfillers, Hoists and Pumps

CABLE ADDRESS, "POLYGON"  
WESTERN UNION CODE

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### Products.

WONDER CONCRETE MIXERS; WONDER PAVER;  
"DOUBLE QUICK" BACKFILLER and GENERAL UTILITY  
POWER UNIT; WONDER IMPROVED TRENCH PUMP;  
WONDER BUILDERS' HOISTS.

### Wonder Mixer, Model 15 Without Loader.

The Wonder is the original of its type. The distinctive features which brought the machine into instant favor, such as tilting drum (charged on one side of the machine and discharged on the other), the wide drum opening, immovable blades, easy cleaning, single drum journal and oscillating trunnion, have proved their superiority. Rollers and travelers are eliminated. The drum revolves on ball bearings and the drum journal is sealed against grit, being lubricated by force feed grease cup underneath the drum.

The blades in the drum have ample clearance, and the angle at which they are set in relation to the cone in the center of the bowl of the drum produces thorough and very rapid mixing when the drum is revolved. Rotation of the drum is secured through a ring gear cast integral with the solid cast semi-steel bowl and a pinion gear on main shaft. The top section of the drum is heavy sheet steel, reinforced edge. The shaft is driven by a sprocket wheel and connected with 3 h. p. Wonder gasoline engine, horizontal hopper cooled type. The gasoline engine is protected by steel housing. Power transmission is through one sprocket chain. The Wonder is thoroughly standardized, every part being interchangeable.

The main frame (or skids) built of heavy I-beam sections is hot pressed to form and hot riveted. Trucks are all-steel, standard wagon gauge. The axles are steel I-beam section, fitted with taper malleable iron skeins cast integral with the axles. The wheels are all-steel, 22 and 26 ins. in diameter, front and rear respectively.



FIG. 1. WONDER MIXER, MODEL 15, WITHOUT SIDE LOADER

The capacity of Model 15 without side loader, is 5 to 6, cu. ft. per batch, unmixed material.

### The Folding Track Side Loader.

The Wonder is the only mixer of similar capacity to which the folding track loader has been applied. As compared with old style loaders it will handle either more batches per hour, allowing equal time for mixing, or permit more time for mixing with same number per hour. The track rests upon the ground, giving great rigidity. It is hinged so as to fold out of the way when moving the mixer about. No incline or platform is required. One man controls the loader, tilts the drum and operates the water-measuring tank by levers at the front of the machine. The side loader practically doubles the capacity of the mixer.

In Model 15 both with and without loader, the drum is tilted by levers. In Models 17 and 20 the drum is tilted by back geared hand wheel. The loader skip has wide neck corresponding to the wide mouth of the drum so that materials slide easily and rapidly into the drum without choking. A cable equalizer keeps the bucket in perfect alignment and spring buffer bar in the overhead assembly absorbs shock of the bucket in case it should strike the frame. The perfect balance of the machine when the skip is elevated and the loader track is folded up will be seen by reference to Fig. 2 which showss Model 17. The gasoline engine on Model 17 is 3½ h. p. Capacity 7 to 8 cu. ft. per batch, unmixed material.

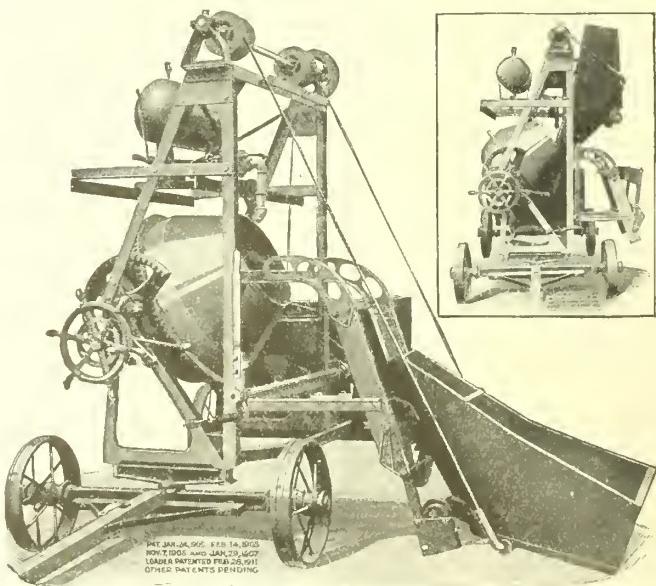


FIG. 2. MODEL 17, WITH FOLDING TRACK LOADER  
Small view shows skip elevated and track folded up for moving machine about

Model 20 is for heavy work. It is of the same general design as Model 17, except that it is built heavier and stronger throughout to accord with its greater capacity. Model 20 has friction clutch which gives free engine for starting and throws the mixer into or out of action. This clutch is of the expanding ring type. The gasoline engine is 5 h. p. Capacity of Model 20 is 10 to 11 cu. ft. per batch, unmixed material.

Wonder mixers are endorsed by contractors throughout the country and many of the largest engineering companies have standardized upon them.

#### Wonder Quick Convertible Discharge Mixer.

This mixer can be changed from side discharge to end discharge or vice versa, by two men, in less than 10 minutes.

The machine is arranged to discharge at the front, the rear, or on either side, without disturbing the trucks or moving them in any direction. This is done by merely removing four bolts in the turn table which is mounted between the truck frame and the I-beam frame of the machine. After turning the mixer frame with the chute pointing to any one of the four sides on which it is desired to discharge, the bolts are replaced and securely tightened, thus rigidly bolting the mixer frame to the truck frame.

On sewer, sidewalk, curb, or work in alleys and in narrow streets, also in streets having car tracks, where a side discharge machine often would take too much room, this new machine will operate to great advantage because material can be charged at the front end of the machine, making it unnecessary to work in the middle of the street.

On street and alley paving an end discharge machine is the most efficient. The drum is high enough from the ground in discharge position (38 ins.) to use a chute. The machine can thus be used for paving work where a large traction paver is not expedient. On the other hand on ordinary sidewalk, curb or sewer work where there is plenty of room, the machine can generally be used to best advantage as side discharge.

The feature of convertibility adds but little weight. The machine is in perfect balance on the turn-table whether used as side or end discharge.

Furnished in all three models of the Wonder mixer, namely Models No. 15, 17 or 20, at small additional cost.



FIG. 3. WONDER QUICK CONVERTIBLE DISCHARGE MIXER,  
SHOWING END DISCHARGE

#### The Wonder Paver.

Drum capacity 10 to 11 cu. ft.; output 10 to 15 cu. yds. per hour. Fast mix, small crew, quick moves, large yardage and great general utility are leading features. Ample power and easy control make it specially valuable in narrow streets and alleys. Chute discharges at 12, 9, or 6 ft. Swings through an arc of about 180°. Removal of the chute converts the paver into a regulation Wonder Mixer traveling under its own power. The skip is open end; by reason of its wide neck, corresponding to the large opening in the drum, also the steep incline (50°), it discharges freely. Steered by irreversible worm and gear. Speed 1½ miles per hour forward, 1 mile reverse. Will climb 20% grade with fair footing. All controls grouped so operator need not leave his seat. This machine combines the superiority of the Wonder as a mixer, with paver requisites of the highest order. Write for full specifications.

#### "Double Quick" Backfiller.

For back-filling, hoisting, snatching teams, grading, pulling sheeting, loading and unloading, placing pipe in trenches, pulling aerial and underground cables, and general utility power purposes. With smaller initial investment than a good team, and less cost of maintenance, the "Double Quick" back-fills at less than half the labor cost of men and teams.

The power is 7 h. p. horizontal, hopper cooled gasoline engine of the Wonder type, mounted upon a revolving platform which swings in a complete circle. It can be locked in various positions and power applied in any direction desired, the operator at all times facing his work. Only two men are required to operate both the machine and scraper, and unskilled labor may be employed.

**OPERATION**—The operation of the "Double Quick" is very simple. In back-filling, the machine is controlled by one lever. The outfit is placed parallel to trench and opposite the loose dirt to a depth depending upon character of soil. The operator pulls the lever controlling winding drum, drawing the scraper with its load to edge of trench, where load is dumped. The instant the scraper reaches edge of trench the power is released and the helper draws scraper back for next load.

The scraper operates in an arc of about 90° at each setting of machine, the turntable automatically accommodating itself to the pull of the scraper.

The speed and load capacity of the pulling line is accommodated to the character of the soil by change of sprockets which are furnished with the outfit and may be quickly attached when required. The speed of the scraper is 100 ft. per minute. Pull 1300 lbs. Capacity 300 ft. of  $\frac{1}{2}$ -in. cable.

The pulling drum is equipped with a cone friction fitted with non-burning asbestos lining. It will hold any load the engine will pull. For general hoisting

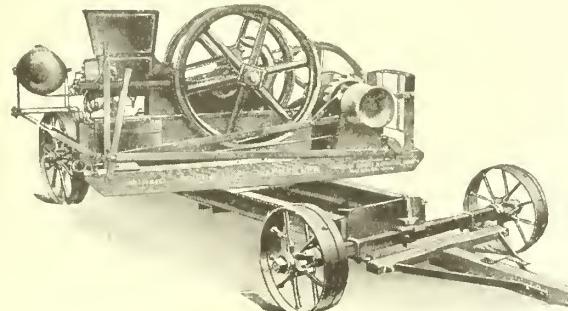


FIG. 4. "DOUBLE-QUICK" BACKFILLER  
Operating side, showing control levers

work a powerful asbestos lined brake is provided, operated by a hand lever.

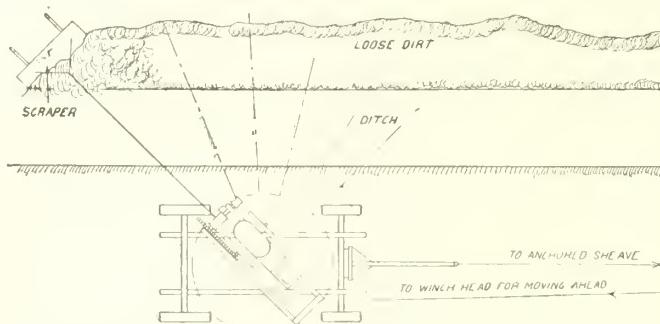


FIG. 5. DIAGRAM OF OPERATION OF THE "DOUBLE QUICK" BACKFILLER

The "Double Quick" can be moved forward under its own power as work progresses. For this purpose there is supplied 300 ft. of  $\frac{5}{8}$ -inch sisal rope, also an anchor spike and sheave. The scraper also furnished is 48 in. wide, 22 in. high, and weighs 75 lbs. complete. The frame of the machine is of heavy steel I-beam and is underslung, making the center of gravity very low. The trucks are standard tread with steel wheels and wide tires. The entire construction is sturdy and designed to withstand hard usage.

We also build the Waterloo Traction Backfiller.



FIG. 6. THE "DOUBLE QUICK" ON BACKFILLING WORK

#### The Wonder Improved Trench Pump.

This pump possesses important new features which give it remarkable capacity, great durability, and make it very economical in operation. One of these is our compensating link. By means of this link the plunger is held in practically vertical position during entire stroke instead of "wabbling" and twisting as in the ordinary diaphragm pump. This saves straining of the diaphragm and lengthens its life. Fullest expansion of diaphragm, combined with extra large waterways, gives capacity in excess of other diaphragm pumps of same size.

The valves are vertical acting, with no sliding contacts and no packings and are easily accessible. All have large openings and will pass the heaviest mud or debris that will enter a 3-in. suction hose. *The lower valve lies flat when closed and is thus a*

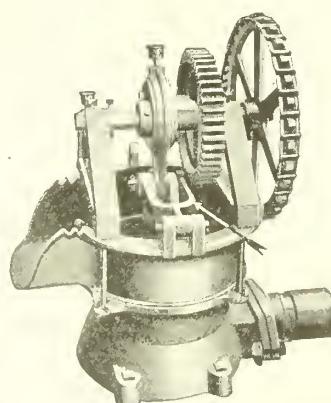


FIG. 7. COMPENSATING LINK SHOWN BY ARROW  
Gear guard removed

*sure primer.* The suction valve is of metal with rubber face and easily removed.

The pump is side suction and side discharge, with 3-in. suction hose furnished with screw connection. The power transmission is by No. 52 sprocket chain. All bearings fitted with grease cups. The pump is furnished on trucks with or without 2 h. p. Wonder gasoline engine, or on skids with or without engine. The entire outfit is built of steel and iron. The skids are of 3-inch channels.

Capacity 3,500 to 4,000 gals. per hour. For extra large capacity, we furnish 2 pumps mounted on a single frame and connected with a  $3\frac{1}{2}$  h. p. Wonder gasoline engine. This outfit has capacity of 7,000 to 8,000 gals. per hour.

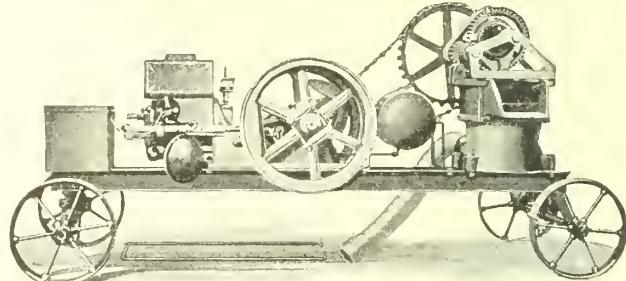


FIG. 8. WONDER IMPROVED TRENCH PUMP COMPLETE ON TRUCKS

#### Wonder Builders' Hoist.

This hoist has only two shafts, being built so that the reversible feature is secured without the use of a third shaft and two extra gears, as in other gasoline hoists. This very materially reduces the power required to operate the mechanism, to say nothing of fewer parts, thereby leaving more power available for hoisting.

The hoist is operated by one clutch lever which engages both direct and reverse gearing. The drum is under complete and easy control by use of a differential brake. A foot pedal controls the brake. With the engine running continuously in one direction, operator may readily reverse the drum, or builders' sheave.

The hoist is equipped with both builders' sheave and winch. These may be operated independently of each other. A feature which distinguishes this hoist from other gasoline hoists is the placing of the drum in front of, rather than beside the engine, thus eliminating tendency to turn the hoist around when pulling a load.

The frame is steel I-beam, giving maximum strength with minimum weight. The gears, chains and protruding parts are covered in a substantial manner to prevent catching of the operator's clothing.

There are no jaw clutches; both reversing clutches are faced with asbestos clutch lining. All dogs are of forged steel.

The engine furnished with this hoist is of the well known and highly efficient Wonder type. It is horizontal, hopper cooled four cycle type, with few parts, all easily accessible. It is widely commended for durability and economy of service with minimum of attention.

Every hoist is given exhaustive tests under practical working conditions before leaving the factory.

The hoist will be furnished with 5, 7, or 9 horse-power gasoline engine; but the latter is recommended, as that size provides ample power for general purposes. Steam engine, electric motor, or belt or gear drive may be substituted for the gasoline engine when desired.

#### Catalogue

Write to head office or to the nearest branch office for Catalogue "S."